

REMARKS

Claims 38-55 are all the claims pending in the application. Claim 38 is the only independent claim.

Withdrawn Claims

Claims 46 and 48-52 are withdrawn from consideration as being drawn to a non-elected invention.

Applicant respectfully requests the Examiner to rejoin these claims once a generic, linking claim is allowed.

Claim Objections

Claims 38 and 53 are objected to because of informalities.

In response, Applicant has amended claims 38 and 53 to recite the “height” alignment so that it is clear that the height alignment and plumb are different alignment directions. As such, the claims specify the height alignment on the one hand and the plumb on the other hand can both be adjusted by means of the co-operation between the binder and the particular construction of the construction element. In contrast, if only the plumb would be adjustable, this could lead to a wall which is well constructed in vertical direction but nevertheless shows a horizontal misalignment. On the other hand if only the height alignment would be adjustable, this could lead to a wall which is well constructed in horizontal direction but shows a vertical misalignment. Both the vertical and the horizontal alignment are needed and therefore the height alignment and the plumb are recited.

In view of the above, Applicant respectfully requests the Examiner to withdraw the claim objection.

Claim Rejections Under 35 U.S.C. § 102

A. Frost

Claims 38-44 and 55 are rejected under 35 U.S.C. § 102(b) as being anticipated by Frost (US 1,197,815).

Claim 38

Applicant has amended claim 38 to recite that “said groove having a volume determining an amount of said binder to be applied therein.” This amendment finds support in the original specification at paragraph [0049] and Fig. 5b in which the amount of binder 17 is determined based on the volume of the groove 5. By determining the amount of the binder in such a way, the binder contributes to the alignment.

Claim 38 has also been amended to recite that “said first construction element is superimposed on said second construction element.” This amendment finds support in the original specification at least at paragraph [0049] and Fig. 5c. This amendment clarifies the claim.

Applicant respectfully traverses the rejection of independent claim 38 at least because Frost does not disclose all of the claims recitations. For example, Frost does not disclose the claimed wall constructed from a plurality of construction elements in which at least one groove extends over the upper face of the construction element, said groove being associated with a load-bearing wall or partition of the construction element at least one protuberance extends over the lower face of the construction element, a protuberance of a first construction element extends on the groove of a second construction element, the *groove has a volume determining an amount of said binder to be applied therein*, said binder being applied in said groove in such a way that a strip of the binder is formed between the upper face and the lower face of the construction

elements, and the strip forming the sole contact between the two superimposed elements, thereby enabling an adjustment of height alignment, height, and plumb of each of the plurality of construction elements.

First, there is absolutely no disclosure in Frost regarding the groove having *a volume determining an amount of said binder to be applied therein*. Instead, as shown in Fig. 2 of Frost, the amount of binder 10 far exceeds the volume of the groove 15.

Second, contrary to what is mentioned by the Examiner, FIG. 1 of Frost does not disclose a wall but instead merely discloses a single brick. Moreover, in Frost the groove is applied along a side wall (see page 2, lines 36-44) and not on the top wall or upper face, as is recited in claim 38. Consequently, the protuberance 6 on Frost's brick is not applied on a bottom wall but *on a side wall*. Indeed, it will not be possible by having a groove and a protuberance on the side wall of a construction element to obtain a height alignment and plumb by using the co-operation of the mortar, the groove and the protuberance. In contrast, in the wall of claim 1, the protuberance and the groove are respectively on the bottom side and the top side. Otherwise, alignment is simply impossible using the groove and the protuberance. Faced with a problem of providing a correct alignment of plumb and height, the skilled person will never start from Frost since the application on the side wall of the protuberance and the groove will simply not enable a correct alignment by using the groove and the protuberance.

Third, the groove 15 of Frost is not associated with a *load-bearing* wall or partition of the construction element. Instead, in Frost, the groove 15 is *associated with the intervening web 4* (see Fig. 1), which is not a load-bearing wall of the construction element.¹

Fourth, Frost does not disclose a protuberance of a first construction element that extends on the groove of a second construction element, when the first construction element *is superimposed* on the second construction element. As can be seen in Fig. 2 of Frost, the protuberance 6 extends in the groove 15 when the bricks *are juxtaposed*, and not superimposed. Likewise, in Frost the binder is not between the upper and lower face (Fig. 2), but is instead between two adjacent side walls and there is thus no adjustment possible.

Fifth, the binder 15 of Frost does not provide an adjustment of height alignment, height, and plumb of each of the plurality of construction elements. The fact that Frost remains totally silent about alignment clearly proves that this was not considered relevant, in particular in view of manufacturing a light weight brick which could easily be dried (page 2, lines 82 – 89).

Thus, for the reasons discussed above, Applicant respectfully requests the Examiner to withdraw the rejection of claim 38.

Claim 39-44 and 55

Applicant respectfully requests the Examiner to withdraw this rejection of claims 39-44 and 55 at least because of their dependency from claim 38.

¹ Compare with the position of the groove 5 shown in Fig. 1 of the original specification.

B. Vigouroux

Claims 38-44, 47 and 55 are rejected under 35 U.S.C. § 102(b) as being anticipated by Vigouroux (FR 1,271,506).

Claim 38

Applicant respectfully traverses the rejection of independent claim 38 at least because Vigouroux does not disclose all of the claims recitations. For example, Vigouroux does not disclose the claimed wall constructed from a plurality of construction elements in which at least one groove extends over the upper face of the construction element, said groove being associated with a load-bearing wall or partition of the construction element at least one protuberance extends over the lower face of the construction element, a protuberance of a first construction element extends on the groove of a second construction element, the *groove has a volume determining an amount of said binder to be applied therein*, said binder being applied in said groove in such a way that a strip of the binder is formed between the upper face and the lower face of the construction elements, and the strip forming the sole contact between the two superimposed elements, thereby enabling an adjustment of height alignment, height, and plumb of each of the plurality of construction elements.

First, Vigouroux does not apply binder in the groove. Moreover, as there is no teaching to use the volume of the groove for binder dosage, thus enabling to contribute in such a manner to the alignment of construction elements.

Second, the analysis, given by the examiner and based on his annotated version of figure 1 of Vigouroux, presented on page 7 of his office action, the Examiner *has mixed up the lower and the upper face*. Indeed, according to the examiner's analysis, the groove "s" and the protuberance "w" are respectively on the upper and the lower face of the construction element. In

reality it is just the other way around, the protuberance “w” is on the upper side and the groove “s” is on the lower side of the construction element.

Third, contrary to what is mentioned by the Examiner, the binder strip “x” between two superimposed construction elements can not enable the adjustment of the alignment of the height and the plumb of each of the plurality of construction elements. Nowhere in Vigouroux this characteristic is mentioned. That the binder in Vigouroux should, in co-operation with the groove and the protrusion, enable the adjustment of alignment and plumb is therefore based on hindsight and could only be obtained by using the knowledge of the present invention. Moreover, it is clearly shown in Fig. 1 of Vigouroux that the space between the groove and the protuberance is not completely filled with binder and air is present on top of the protuberance. Specifically, on page 2, left column lines 15-17 of Vigouroux, it is mentioned that the height of the ribs A, B, C can be varied and is equal to thickness of the desired horizontal binder strip (*la hauteur de ces nervures est variable et égale à l'épaisseur du joint horizontal désirée*). This signifies that the depth of the groove “s” in Vigouroux *does not contribute in determining the thickness of the binder layer*.

Fourth, in the right hand column of page 2, it is mentioned on lines 12-14 that the end of each waveform P penetrates deeply into the binder and pushes the binder into part P'. As can be seen in Fig. 1 of Vigouroux, P' is not in the groove as there are no waveforms in the groove. This explains why the space between the top of the protuberance and the bottom of the groove in Vigouroux is not completely filled with binder. Therefore, there is not sufficient binder in the space between the protuberance and the groove to enable the alignment of height and plumb.

Fifth, if the “s” is the groove, according to the Examiner’s interpretation of Vigouroux, it is not possible to apply binder in this groove “s” when building the wall. Indeed, as the groove is on the under side, the binder would fall out of the groove due to gravity when placing the construction element. It will thus be clear that the Examiner is misinterpreting the teachings of Vigouroux.

Thus, Applicant respectfully requests the Examiner to withdraw this rejection of independent claim 38.

Claims 39-44, 47 and 55

Claims Applicant respectfully requests the Examiner to withdraw this rejection of claims 39-44, 47 and 55 at least because of their dependency from claim 38.

Claim Rejections Under 35 U.S.C. § 103

A. Breaky

Claims 38, 41, 44, 45, 47 and 55 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Breaky (US 2,162,417).

Applicant respectfully traverses the rejection of independent claim 38 at least because Breaky does not disclose or suggest all of the claims recitations. For example, Breaky does not disclose or suggest the claimed wall constructed from a plurality of construction elements in which at least one groove extends over the upper face of the construction element, said groove being associated with a load-bearing wall or partition of the construction element at least one protuberance extends over the lower face of the construction element, a protuberance of a first construction element extends on the groove of a second construction element, the *groove has a volume determining an amount of said binder to be applied therein*, said binder being applied in

said groove in such a way that a strip of the binder is formed between the upper face and the lower face of the construction elements, and the strip forming the sole contact between the two superimposed elements, thereby enabling an adjustment of height alignment, height, and plumb of each of the plurality of construction elements.

First, Breaky, like Frost and Vigouroux, does not establish a relationship between the volume of the groove and the amount of used binder.

Second, according to the Examiner, the protuberance AA of the first construction element (10) extends in the groove (15) of the second construction element when the first construction element is superimposed on the second construction element. This is not correct. As is clearly shown in Fig. 3 (also used by the Examiner), the protuberance AA is partially in contact with the mortar or binder 19 *but does not actually extend within the groove 15*. Instead, the protuberance only extends within the groove 15 *when the construction elements are stacked for storage or transport* (Fig. 2). When the wall is constructed (Fig. 3), the groove is completely filled with mortar and the protuberance can not even reach the upper side of the second construction element. There is thus clearly no penetration of the protuberance in the groove. Moreover, as is also shown in Fig. 3, there is always a void 20 (see page 2, line 70 right column) around the protuberances and the grooves so that the mortar is not the sole contact between two superimposed elements.

Third, even assuming *arguendo* that Breaky teaches that the layer of mortar can be of any desired thickness, this does not signify that Breaky teaches adjusting the alignment, plumb and height by using the combination of the mortar, the protuberance and the groove. As Breaky requires the presence of a void for absolutely preventing water seepage from one side of the wall

to the other by capillary action through the mortar (column 4, lines 68-75), reducing the amount of mortar would cause the protuberance 14a to contact the bottom of the groove of the first construction element, thereby eliminating the required void 20. So, the necessity of a void in Breaky prevents the protuberance AA to penetrate into the groove when the construction elements are superimposed to build the wall. So less mortar, as suggested by the Examiner, will not obviously result in the protuberance extending into the groove, but will simply destroy a requirement imposed by the teaching of Breaky. The necessity of the void thus prevents the use the mortar as sole contact between two superimposed construction elements and thus the possibility to thereby enable an adjustment of alignment, height and plumb of each of the construction elements in the wall. In contrast, it is only by using the teachings of the present application that the Examiner could come to an argument for finding the present invention obvious in view of Breaky. Again, such a hindsight can not be used, the necessity of a void in Breaky teaches the skilled person away from the solution of claim 38, which is therefore inventive in view of Breaky.

Thus, Applicant respectfully requests the Examiner to withdraw this rejection of independent claim 38.

Claims 41, 44, 45, 47 and 55

Claims Applicant respectfully requests the Examiner to withdraw this rejection of claims 41, 44, 45, 47 and 55 at least because of their dependency from claim 38.

B. Other §103 rejections

Claim 53 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Frost in view of Hanner (US 2,821,426).

Claim 53 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Vigouroux in view of Hanner (US 2,821,426).

Claim 54 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Vigouroux in view of Herzog (FR 509,431) and Huberty (US 2002/0038532).

Claim 54 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Breaky (2,162,417), Herzog (FR 509,431) and Huberty (2002/0038532).

Applicant respectfully requests the Examiner to withdraw these rejections of the various dependent claims at least because of their dependency from claim 38 since the various secondary references do not make up for the deficiencies in Frost, Vigouroux, or Breaky.

Moreover, with respect to claim 54, the Examiner rejects this claim as being unpatentable over Vigouroux in view of Herzog and Huberty. According to the examiner Herzog discloses a construction element having a height greater than or equal to the length. This is not correct.

Referring to Fig. 3 of Herzog, the length is 5.5 cm, while the height $h = 2.6$ cm. Thus the height is smaller than the length, and the Examiner is misunderstanding the teaching of Herzog. That is, the length is measured in horizontal direction, and the height in a vertical direction due to the fact that Fig. 3 illustrates the configuration of a wall (see lines 21-22). Thus, not only Herzog does not teach a *height greater or equal than the length*, but in fact Herzog teaches the contrary. Thus Herzog leads away from having a height greater or equal than the length and therefore cannot render claim 54 obvious.

In addition, in Vigouroux the protuberance and the groove are on the top and under side, whereas in Herzog they are on the lateral sides, so a combination of both Vigouroux and Herzog

is only a theoretical possibility, but not a practical one, as both construction elements are substantially different constructions.

Finally, the Examiner refers to Huberty for providing a prior art mentioning a construction element having a weight less than or equal to 25 kg. Even if it is as such correct, it should not be overlooked that Huberty teaches a construction element comprising an opening in the form of a splayed U on each of the transverse sides of the parallelepiped (page 5, claim 1, lines 5-7). Such an open construction element is not compatible with the closed construction element taught by Vigouroux. Consequently, the combination of Vigouroux and Huberty suggested by the examiner is theoretical but would never be considered by a skilled person as both types of construction elements are so different that they can not be combined. It should not be overseen that an open construction has by definition a lighter weight than a closed one of the same dimensions, simply because there is less material in the open construction element.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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